UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT BJEKOVIC, KONRAD EIPPER,
BRUNO MOLTGEN, JORN ROTH
and MARKUS VENNEMANN

Appeal No. 2006-1484
Application 09/828,480[1]

HEARD: June 7, 2006

Before GARRIS, PAK and KRATZ, Administrative Patent Judges.

PAK, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's final rejection of claims 1, 3 through 25, and 27 through 29, which are all of the claims pending in the above-identified application. We have jurisdiction pursuant to 35 U.S.C. § 134.

[1] Application for patent filed April 9, 2001.

APPEALED SUBJECT MATTER

Claims 1 and 18 are representative of the subject matter on appeal and read as follows:

> 1. A process for producing a component with an inner fabric, comprising:
>
> providing a plurality of fabric layers, one layer on top of another layer, wherein the plurality of fabric layers comprise a polymer fabric;
>
> arranging a plastic layer between at least one pair of the plurality of fabric layers, wherein the plastic layer has a melting point of at most a melting point or a decomposing temperature of the plurality of fabric layers;
>
> pressing the plurality of fabric layers and the plastic layer under a pressure greater than atmospheric pressure;
>
> at least partially melting the plastic layer;
>
> melting a maximum of approximately 10 vol. % of fibers of the plurality of fabric layers;
>
> after reaching a desired final form, cooling the melted plastic;
>
> monolithically bonding the plurality of fabric layers to one another by the partially-melted fibers, wherein the layer of plastic is in at least one of a powder form or a sheet form.

> 18. A component, comprising:
>
> a plurality of fabric layers, each fabric layer comprising fibers of which a maximum of approximately 10 vol. % have been melted; and
>
> one or more plastic layers arranged between the plurality of fabric layers,
>
> wherein a melting point of the one or more plastic layers corresponds at most to at least one of a melting point or a decomposing temperature of the fibers.

PRIOR ART

The prior art references relied upon by the examiner in support of the § 103 rejection before us are:

Stricker et al. (Stricker)	5,670,235	Sep. 23, 1997
Dinter et al. (Dinter) (Published European Patent)	EP 0418772 A3	Mar. 27, 1991[2]

REJECTION

Claims 1, 3 through 25, and 27 through 29 stand rejected under 35 U.S.C. § 103 as unpatentable over the combined disclosures of Dinter and Stricker.[3]

OPINION

We have carefully reviewed the claims, specification and prior art, including all of the arguments advanced by both the

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[2] The examiner relies on the English translation of DE 3931452 provided by the appellants as the Dinter disclosure in rejecting the claims on appeal. See the Answer, page 3. The examiner states, and the appellants do not disagree, that Dinter is equivalent to DE 3931452. Compare the Answer, page 3, with the Brief and the Reply Brief in their entirety.

[3] As is apparent from page 2 of the final Office action dated November 2, 2003, page 2 of the Answer dated September 21, 2004, page 2 of the Supplemental Answer dated June 20, 2005, and page 5 of the appellants' Brief dated July 7, 2004, the examiner has inadvertently omitted claim 25 from the statement of rejection set forth at page 3 of the Answer. Consistent with the appellants' Brief and the examiner's final Office action, we have included claim 25 in the statement of rejection set forth in the Answer.

examiner and the appellants in support of their respective positions. This review has led us to conclude that only the examiner's rejection of claims 18 through 25 and 27 through 29 is well-founded. Accordingly, we affirm the examiner's decision rejecting claims 18 through 25 and 27 through 29 under 35 U.S.C. § 103, but reverse the examiner's decision rejecting claims 1 and 3 through 17 under 35 U.S.C. § 103. Our reasons for these determinations follow.[4]

As correctly found by the examiner (the Answer, page 3 and the Supplemental Answer, page 3), both Dinter and Stricker teach a molded article made of a plurality of plastic and fabric layers. Stricker, for example, teaches forming a molded panel material having a polypropylene thermoplastic support layer (2) between a decorative polypropylene fabric layer (3) and a polypropylene backing fabric layer (4). See column 7, lines 20-45 and column 8, lines 33-43. The polypropylene thermoplastic support layer is heated to a soften state so that "it can be thermoplastically bonded with the polypropylene fibers of the decorative layer 3 and the backing 4." See column 9, lines 5-10. In another embodiment, Stricker teaches heating the support layer

[4] Pursuant to 37 CFR § 41.37(c)(1)(vii)(2004), we limit our discussion to the separately argued claims.

and the decorative layer together to thermally bond the above three layers prior to molding. See column 9, lines 25-53. By teaching the employment of the same material, i.e., polypropylene, to form both the decorative and backing fabric layers and the thermoplastic support layer, Stricker implicitly teaches or would have suggested that all of these layers have the same melting or decomposing temperatures.

Although Striker does not teach partially melting both the decorative and backing fabric layers, we determine that claim 18 as a whole does not preclude the molded article of the type described in Stricker. Specifically, we determine that the phrase "a plurality of fabric layers, each fabric layer comprising fiber of which a maximum of approximately 10 vol. % have been melted" as used in claim 18 includes fabric layers having no melted fibers (less than 10% by volume melted fibers), such as those taught by Stricker. See, e.g., In re Mochel, 470 F.2d 638, 640, 176 USPQ 194, 195 (CCPA 1972). Thus, we concur with the examiner that one of ordinary skill in the art would have been led to arrive at the subject matter defined by claims 18 through 22 and 25 within the meaning of 35 U.S.C. § 103.

As to claims 23 and 24, we concur with the examiner that Stricker, by virtue of teaching the employment of an "open-cell

and pore layer" between a surface layer and a sheet, would have suggested employing a centrally located foam layer within the meaning of 35 U.S.C. § 103. We note that the appellants do not dispute the examiner's finding that the "open-cell and pore layer" is a definition for or inclusive of a foam layer. Compare the Answer, page 5, with the Brief in its entirety.

As to claims 27 through 29, we observe no reversible error in the examiner's finding that the size of the filaments of the backing and decorative layers taught by Stricker is a result effective variables inasmuch as the size of the filaments is known to affect, for example, design and reinforcement functions. Thus, we concur with the examiner that one of ordinary skill in the art would have been led to employ optimum filament sizes, such as those claimed, within the meaning of 35 U.S.C. § 103. In re Boesch, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980)("[D]icovery of an optimum value of a result effective variable . . . is ordinarily within the skill of the art.").

Thus, based on the totality of record, including due consideration of the appellants' arguments, we determine that the preponderance of evidence weighs most heavily in favor of obviousness regarding the subject matter defined by claims 18 through 25 and 27 through 29 within the meaning of § 103.

Accordingly, we affirm the examiner's decision rejecting claims 18 through 25 and 27 through 29 under § 103.

With respect to claims 1 and 3 through 17, they, unlike claims 18 through 25 and 27 through 29, require the claimed fabric and plastic layers be partially melted during molding to form a desired article. See claim 1. However, as indicated by the examiner at page 3 of the Answer, Dinter "does not teach that the fibers of the reinforcing fabric should partially melt during molding." Moreover, Striker teaches heating only plastic layer or only plastic and decorative layers prior to molding to place the plastic layer in a soften state (non-melted state) for thermal bonding as indicated supra. Thus, even if Dinter and Stricker can be combined, they would not have suggested partially melting the fibers of the fabric layers during molding to form a desired article within the meaning of 35 U.S.C. § 103.

Thus, we determine that the examiner fails to establish a prima facie case of obviousness regarding the subject matter defined by claims 1 and 3 through 17 within the meaning of § 103. Accordingly, we reverse the examiner's decision rejecting claims 1 and 3 through 17 under § 103.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

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